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Looming threat of COVID-19 infection in Africa: act collectively, and fast



Because of the high volume of air traffic and trade between China and Africa,¹ Africa is at a high risk for the introduction and spread of the novel coronavirus disease 2019 (COVID-19); although only Egypt has reported the first case, from a non-national.² The greatest concern for public health experts is whether COVID-19 will become a pandemic, with sustained year-round transmission, similar to influenza, as is now being observed in several countries.³ What might happen to Africa—where most countries have weak health-care systems, including inadequate surveillance and laboratory capacity, scarcity of public health human resources, and limited financial means—if a pandemic occurs? With neither treatment nor vaccines, and without pre-existing immunity, the effect might be devastating because of the multiple health challenges the continent already faces: rapid population growth and increased movement of people; existing endemic diseases, such as human immunodeficiency virus, tuberculosis, and malaria; reemerging and emerging infectious pathogens such as Ebola virus disease, Lassa haemorrhagic fever, and others; and increasing incidence of non-communicable diseases.

Models that enable the continent to better allocate scarce resources to better prepare and respond to the COVID-19 epidemic are crucial. The modelling study by Marius Gilbert and colleagues in *The Lancet*⁴ identifies each African country's risk of importation of COVID-19 from China, using data on the volume of air travel from three airports in provinces in China to African countries. Gilbert and colleagues use two indicators to determine the capacity of countries to detect and respond to cases: preparedness, using the WHO International Health Regulations Monitoring and Evaluation Framework; and vulnerability, using the Infectious Disease Vulnerability Index. Based on their analysis, Egypt, Algeria, and South Africa had the highest importation risk, and a moderate to high capacity to respond to outbreaks. Nigeria, Ethiopia, Sudan, Angola, Tanzania, Ghana, and Kenya had moderate risk with variable capacity and high vulnerability. In the model, the risk mainly originates from Guangdong, Fujian, and Beijing. The

study provides a valuable tool that can help countries in Africa prioritise and allocate resources as they prepare to respond to the potential introduction and spread of COVID-19.

The study should also be interpreted in light of the fast-evolving nature of the COVID-19 outbreak. First, with the exception of Ethiopian airlines, all African airlines have suspended flights to China. Although these measures might delay, but not stop,⁵ the importation risk of COVID-19 into Africa, their implementation is still worthwhile. Second, although Beijing, Shanghai, and Fujian do not report the highest number of cases of COVID-19 in China, the volume of travel from these cities to Africa is high, which might increase the risk of exporting cases to Africa. Lastly, almost half of the flights from Africa to China are operated by Ethiopian Airlines, so it is possible that cases might pass through Ethiopia and affect destination countries.

The report by Gilbert and colleagues⁴ provides an important tool to map out the continental risk for the spread of COVID-19 in Africa, which should be used to inform a framework of action to prepare the continent for any potential importation and spread of COVID-19. First, collectively, Africa needs a unified continent-wide strategy for preparedness and response. The strategy must be comprehensive, and member states,

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donors, and partners should immediately commit to releasing financial resources to support country-customised implementation plans derived from the strategy. To help develop a common strategy that will allow for effective coordination, collaboration, and communication, the African Union Commission, Africa Centres for Disease Control and Prevention (Africa CDC), and WHO, in partnership with African countries, have established the Africa Taskforce for Coronavirus Preparedness and Response (AFTCOR). The partnership has six work streams: laboratory diagnosis and subtyping; surveillance, including screening at points of entry and cross-border activities; infection prevention and control in health-care facilities; clinical management of people with severe COVID-19; risk communication; and supply-chain management and stockpiles. Because mitigating the potential spread of COVID-19 in Africa will require rapid detection and containment, the laboratory work streams of AFTCOR, Africa CDC, and WHO are working closely to expeditiously scale up diagnostic testing capacity linked to enhanced surveillance and monitoring—eg, at the beginning of February, only two countries in Africa had the diagnostic capacity to test for COVID-19. However, as of Feb 25, 2020, more than 40 countries would have been capacitated to accurately diagnose COVID-19 infection, thanks to the coordination efforts of AFTCOR.⁶ As testing becomes more available, it is possible that more cases might be detected. Second, any effective preparedness and response strategy for COVID-19 requires a committed political will; as such, the African Union Commission, Africa CDC, and WHO convened, on Feb 22, 2020, in Addis Ababa, Ethiopia, an emergency meeting of all ministers of health of 55 member states to commit to acting fast and collectively to develop and implement a coordinated continent-wide strategy. AFTCOR taskforce was formed, and a continent-wide strategy was endorsed at the end of the emergency meeting, with a call for strong coordination of efforts. To prevent the occurrence of a social, health security, and economic tragedy, actions agreed at the emergency ministerial meeting will need to be acted on quickly, before any additional COVID-19 cases are introduced to the continent, and result in sustained human-to-human transmission. The potential social, economic, and security devastation that COVID-19 could cause in Africa should be enough of an incentive for African

governments to invest immediately in preparedness for the worst-case scenario. Third, commitment and release of financial resources from partners and donors before a crisis hits Africa will help anticipate demand and address supply chain management, mapping, and stockpiling of COVID-19 response needs, such as large quantities of personal protective equipment, gloves, surgical masks, coveralls, and hoods, and medical countermeasures like antiviral agents. Supplies of these items will be limited in Africa because of reduced manufacturing capacity.

Fourth, national, regional, and international organisations need to cooperate and collaborate to optimise limited supplies, using a whole of government approach. Fifth, all member states will need to urgently develop and put in place proper quarantine and infection control protocols, including procedures for implementing social distancing (mass gathering and potential closure of public facilities). Lastly, the capacity-building training efforts that Africa CDC and WHO are conducting must be implemented and cascaded immediately down the health system pyramid in each country. Medical staff at major hospitals must be trained in the proper protocols of quarantining individuals who are at-risk of COVID-19 infection, as well as isolation and safe treatment of patients who test positive. As the Director General of WHO has stated several times, the window of opportunity to act is narrowing. Africa needs to be supported to act now, and needs to act fast.

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